3-1 Reteach to Build Understanding

Graphing Polynomial Functions

1a. Complete the tables to identify type of polynomial.

Type of Polynomial		Degree of Polynomial (Greatest Exponent)			
		1–Linear	2–	3–Cubic	4–Quartic
Number of Terms	1–Monomial	Linear Monomial	Monomial	Cubic	
	2–Binomial	Linear Binomial		Cubic	
	3–	Trinomial	Quadratic Trinomial		

1b. Identify the degree, number of terms, type, and leading coefficient of each equation.

	Explanation	$5x^2 - 2x - 9$	$-x^3 + 5$
Degree	Greatest exponent.		
Number of Terms	The number of items being added together.		
Type	See "Type of Polynomial Table".		
Leading Coefficient	The number being multiplied times x to the greatest exponent.		

2. Cameron graphed $f(x) = x^3 - 6$. He concluded that it is a quadratic trinomial. What was his error?

3. Complete the table to describe the graph using the leading coefficient and degree of the function.

		Leading Coefficient	
		Positive	Negative
Largest Exponential Value	Odd Degree	As $x \to +\infty$, $y \to \infty$ As $x \to -\infty$, $y \to \infty$	As $x \to +\infty$, $y \to \infty$ As $x \to -\infty$, $y \to \infty$
	Even Degree	As $x \to +\infty$, $y \to$ As $x \to -\infty$, $y \to$	As $x \to +\infty$, $y \to$ As $x \to -\infty$, $y \to$